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AUTHOR Snodgrass, Sara E.; And Others
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ABSTRACT

Research has shown that children's differentiation of gender-appropriate behavior is not directly affected by their teacher's gender. However, the teacher's behavior in relation to the material being taught may convey the sex-appropriateness or inappropriateness to the child. To examine the effects of student gender and sexual stereotype of the instructional material on the nonverbal behaviors of the teacher, 10 teachers from upper elementary grades taught 20 first-grade and 20 second-grade students. Each teacher taught individual lessons in which items were stereotyped as either traditionally feminine or traditionally masculine to 2 girls and 2 boys. Lessons were videotaped and judged for warmth, enthusiasm, and reinforcement. Results showed that incongruence between the sexual stereotype of the items and the gender of the student affected the nonverbal behavior of the teacher. Teachers were judged to be friendlier toward female students while working on material that was culturally inappropriate for females and to be friendlier toward male students on material that was culturally more congenial to the student's gender. The findings suggest that differential teaching behaviors may contribute to the sex-role socialization of students. (Author/NRB)

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SEX ROLE SOCIALIZATION

VIA TEACHERS' BEHAVIOR AND SEXUALLY STEREOTYPED MATERIALS

Sara E. Snodgrass, Robert Rosenthal & Peter D. Blanck

Harvard University

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Running Head: Nonverbal Teaching Behavior, Gender, and Sextyped Material

Sex Role Socialization

Via Teachers' Behavior and Sexually Stereotyped Materials

During the past decade the sex role differentiation found in American culture has been examined closely. Researchers have asked questions such as "Do children learn that certain behaviors are more appropriate for one sex than for the other?", "If so, how do they learn these differences?", "What role does the educational system play in this sex-role socialization?", and "If teachers are teaching appropriate sex role behavior, how do they do it?".

In the early seventies, researchers began investigating whether children actually do differentiate behaviors according to gender. Their results showed that children know what kinds of tasks are more culturally appropriate for their own gender and that they (1) prefer to do better at (Liebert, McCall, & Hanratty, 1971; Stein, 1971), (2) actually perform better on (Montemayor, 1974), and (3) spend more time working on (Graf and Riddell, 1972) tasks that are more related to their gender.

While much of the research investigating the source of this sex-role socialization has been directed toward the parent-child relationship (for reviews see Maccoby, 1966 and Maccoby and Jacklin, 1974), many critics began pointing to the predominance of female teachers in elementary schools as a possibly undesirable academic environment for boys. Good, Sikes, and Brophy (1973) examined this hypothesis and found no real differences in the way male and female teachers treated boys and girls. In their review of the literature, Brophy and Good (1974)

reported that children seemed to develop clear ideas of gender-appropriate behaviors whether taught by a female, by a male, or by a male-female team.

If children actually do differentiate gender-appropriate behaviors and yet the gender of their teacher does not directly affect their learning of these differences, perhaps it is the way the teacher behaves in relation to the material being taught that conveys the sex-appropriateness or inappropriateness to the child. To investigate this hypothesis, we must first find out whether the material being taught has any effect upon the teacher's behavior. This study was designed to investigate whether teacher behaviors might be affected by the sex-role stereotype of the material being taught. In this study we specifically examined the effects of student gender and sexual stereotype of the material being taught on the nonverbal behaviors of the teacher.

Perdue and Connor (1978) found that teachers touched children of their own sex more often than those of the opposite sex, and suggested that differences in teacher's nonverbal communication to boys and girls may play a role in sex-role socialization. Although few studies have conducted relating teachers' nonverbal behaviors to sex role socialization, there has been much research on teacher's nonverbal behavior as it relates to other dependent variables. Woolfolk, Woolfolk, and Garlinsky (1977) found that the teacher's nonverbal as well as verbal behaviors influenced students' perception of the teacher and attraction to the teacher. Feldman (1976) found that teachers' nonverbal behavior revealed their underlying affective states when interacting with a student. Rosenshine (1971) reviewed sixteen studies relating ratings of

teacher warmth to student achievement, twelve of which showed consistent, positive relationships. Rosenshine (1971) also reviewed five studies which showed significant positive correlations between ratings of teacher enthusiasm and student achievement. To determine whether "warmth" is judged more from verbal or nonverbal cues, Gafner (1976) studied students' perceptions of teacher warmth and found that students perceive teacher warmth primarily through identifiable nonverbal channels.

Based on these findings that teacher nonverbal behaviors relate to student achievement and given our hypothesis about the material being taught, we had reason to believe that teacher nonverbal behaviors might be affected by the interaction of the sexual stereotyping of the material and the gender of the student. In a study designed to explore the mediators of teachers' expectancy we incorporated sexually stereotyped material to simultaneously examine the effects of student gender and sexual stereotype of the meaterial being taught on teachers' nonverbal behaviors; i.e., do teachers behave differently with boys and girls when teaching material that is traditionally masculine or feminine?

Method

Subjects. The students were 20 first grade and 20 second grade pupils in a public elementary school. Within each grade level there were 10 boys and 10 girls. The 10 teachers (7 females, 3 males) were all of the fourth, fifth, and sixth grade teachers from the same school. (We selected teachers in the higher grades to minimize the likelihood that they would know their students in the study, as part of the expectancy manipulation).

Design. Each teacher taught four students, 2 females and 2 males.

The teachers saw each pupil individually for a ten minute lesson. Lessons were designed for each grade level containing questions that the teachers were to ask the students in an oral test format. Each student was given two lessons: a verbal lesson containing sentence completion problems in which the student was to choose one of three words to best complete the sentence; and a quantitative lesson in which the student was given arithmetic word problems to solve. Each of these lessons contained one-half traditionally masculine stereotyped questions and one-half traditionally feminine stereotyped questions, randomly ordered within the lesson. For example, a masculine-type question would concern baseball or cars and a feminine-type question would concern dolls or cooking.

Procedure. After being introduced to the student, the teacher read the questions to the student. After the child answered each question the teacher was free to respond and to teach the child in any way he or she wished. Teachers were given ten minutes to cover as much of the material as they could and were asked to be sure to cover some of both the verbal and quantitative lessons. The entire ten minute interaction was videotaped.

Judging. Judges observed the entire ten-minute videotaped interactions of each teacher and student. For each question asked of each pupil, two judges made ratings on a scale from 1 to 7 on their perceptions of overall climate variables such as warmth, enthusiasm,

and reinforcement. Two judges also tallied, for each question asked of each pupil, the number of times the teacher smiled at the pupil.

For the analysis, a dependent variable called "friendly climate" was created by combining the ratings of "warmth", "enthusiasm", and "reinforcement". These three ratings correlated highly with each other (mean r = .60) and had homogeneous variances (.47, .46, .30), and so were combined to form a more global measure of overall climate. We also analysed the number of times the teacher smiled at the pupil. The inter-judge reliability coefficient for the climate variable was .60 and for smiles it was also .60. The two dependent variables were not considered to be merely different measurements of the same concept since their correlation was only .30. This indicates that the judges' ratings of the climate variables were not very closely related to the number of times the teacher smiled at the pupil.

Multi-way analyses of variance were performed on these dependent variables with independent variables of pupil sex, type of lesson (quantitative vs. verbal), and sexual stereotype (sextype) of question (masculine vs. feminine). The last two were within student (repeated measures) factors.

Results and Discussion

The major findings of the study involved the interactions of student gender with the sex-type (sexual stereotype) of the items and the lessons. Generally, the gender of the student significantly affected the nonverbal behaviors of the teacher differently on the masculine vs. the feminine sex-type items and lessons.

Research suggests that females may be expected to do better on verbal questions while males may be expected to do better on quantitative questions (cf., Benbow & Stanley, 1980, Maccoby & Jacklin, 1974; Stanley, Keating, & Fox, 1974; for reviews see Fox, Tobin, & Brady, 1979, and Smith, 1969).

Our results show that these expectations in our culture may be predictive of the nonverbal behavior of teachers. We found a strong interaction between the gender of the student, the sex-type of the items and the type of lesson on teacher's friendly climate toward the pupil ($\underline{F}(1,31) = 4.63$, $\underline{p} = .040$, $\underline{d} = 0.77$[1]). Male students were treated with relatively more friendliness than females on masculine-typed quantitative items and on feminine-typed verbal items, while female students were treated with relatively greater friendliness on masculine-typed verbal items and on feminine-typed quantitative items. In other words, female students experienced a relatively more friendly climate than males when the sex-type of the items was incongruent with the sex-type of the lesson. (For example, "gender-incongruence" would be verbal items that had to do with sports or cars, considered incongruent since verbal items are supposed to be "feminine" but sports and cars are supposed to be "masculine".)

One possible explanation may be found in that aspect of our culture in which it is more acceptable for a female than for a male to behave in gender incongruent ways (cf., Kohlberg, 1966; Mead, 1949). For example, it is more acceptable for a girl to be a sports enthusiast than for a boy to play with dolls. It may very well be this cultural difference for males and females that affects the teacher's nonverbal behaviors towards the pupils. These results suggest that teachers may have felt more comfortable when working on items that were incongruent in sex-type when they were with female pupils than when with male pupils, thus appearing relatively more friendly with the girls when the items were culturally more foreign. This same interaction appeared when looking at the number of times the teacher smiled at the pupil ($\underline{F}(1,31) = 5.08$, $\underline{p} = .032$, $\underline{d} = 0.81$) showing that teachers smiled at girls relatively more when the sex-type of the item was incongruent with

the lesson (feminine-quantitative and masculine-verbal items), and smiled relatively more at male pupils when the sex-type of the item was congruent with the lesson (feminine-verbal and masculine-quantitative items).

Since female students experienced relatively more friendliness on gender incongruent items than males, it may be that teachers perceive gender incongruent items as culturally more foreign to males than to females and, therefore, become more uncomfortable when working on such items, resulting in less friendly behaviors. If, in our culture, it is more appropriate for females than for males to behave in gender-incongruent ways, then it may very well be that teachers are more uncomfortable when working with boys on gender incongruent items, and that they thus discourage boys from gender incongruent behaviors by relating in a less friendly manner when working on such items.

In summary, the nonverbal behaviors and climate generated by teachers in this study were found to be affected by the interaction of the gender of the student with the sexual stereotype of the material being taught. In general, teachers' nonverbal behaviors were judged to be relatively friendlier toward female students while working on material that was culturally foreign, and to be relatively friendlier toward male students on material that was culturally more congenial to the student's gender.

These results suggest a relationship between teacher's nonverbal behaviors and the sexual stereotypes in our culture, in that teachers may contribute to sex-role socialization by relating differently to boys and girls. If students perceive that teachers behave differently with boys when working on nontraditional type material than they do with girls, then they may learn that they, too, should relate to materials differently. Perhaps this

is one way children learn that it is more acceptable for girls to be "tomboys" than for boys to be "sissies" (gender-incongruent behaviors).

The results of this study suggest that our culture's different expectations for males and females may influence teachers' nonverbal behaviors towards students when working on material that is gender congruent vs. gender incongruent. It seems that teachers' behavior, in turn, may contribute to the sex-role socialization of their students.

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Footnote

[1] The d is defined as an estimate of the effect size, expressed in standard deviation units (Cohen, 1977), defined conceptually as $(M_1 - M_2)/\sigma$ and computed as $2\sqrt{F}/\sqrt{df}$ in this paper. Cohen considers a d of 0.20 to be a small effect, 0.50 a medium effect, and 0.80 a large effect.